

WHAT WE CLAIM IS:

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1. A method of controlling drag and vortex induced vibration in a substantially cylindrical element comprising providing an ultra-smooth surface about the cylindrical element.
 - 5 2. A method of controlling drag and vortex induced vibration in accordance with Claim 1 wherein providing the ultra-smooth surface comprises providing a coating having a K/D ratio of about 1.0×10^{-4} or less where:

K is the average peak to trough distance; and

D is the effective outside diameter of the cylindrical element, including the coating.
 3. A method of controlling drag and vortex induced vibration in accordance with Claim 1 wherein providing the ultra-smooth surface comprises providing a substantially cylindrical sleeve having a K/D ratio of about 1.0×10^{-4} or less where:

K is the average peak to trough distance; and

D is the effective outside diameter of the cylindrical element, including the sleeve.
 4. A system for controlling drag and vortex induced vibration, comprising:

a substantially cylindrical marine element; and

20 an ultra-smooth effective surface about the substantially cylindrical marine element.
 5. A system in accordance with Claim 4 wherein the ultra-smooth cylindrical surface is a coating material having a K/D roughness parameter of about 1.0×10^{-4} or less where:

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D is the effective outside diameter of the cylindrical element, including the sleeve.